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AUTHOR Whitley, Bernard E., Jr.
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ABSTRACT

Researchers in attribution theory have used two styles in wording attributional questions. The informational style asks subjects the extent to which they possess ability, effort and luck relative to a task, and task difficulty. The causal style asks subjects the extent to which various factors influenced or caused the outcome. A study was undertaken to assess the impact of question wording style on the attributions made for an achievement task. College students (N=39) played a video game which required them to use logic to deduce a randomly selected number. After playing, subjects made informational and causal attributions to ability, effort, task difficulty, and luck for their performance on the game, and rated their success at the game. The effect of question wording style on attributions was assessed by comparing the correlations of the two types of attributions with the success ratings. The results indicated that informational attributions to ability had a higher correlation with success than did causal attributions. Correlations of informational attributions with success were also significantly different from those of causal attributions for task difficulty and luck. Results from regressing the causal attributions on linear and quadratic components of the informational attributions indicated significant curvilinear relationships for all four attributional categories. These results suggest that causal and informational attributions are not equivalent. (NRB)

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The Effect of Question Wording Style on Attributions for Success and Failure

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Bernard E. Whitley, Jr.
Ball State University

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In the early 1970s Weiner et al. (1971) proposed an attributional theory of achievement motivation linking individuals' reactions to achievement outcomes to their causal explanations for the events. Although modified and extended, the theory has received extensive empirical support (e.g., Frieze, 1980; Weiner, 1979). One of the difficulties in interpreting attributional research is that various researchers have used different types of scales, which yield quite different results, to assess attributions (Elig & Frieze, 1979). Another assessment problem is the wording of attributional questions: two different, and possibly nonequivalant, styles have been used. The informational style asks subjects the extent to which they possess ability, effort and luck relative to the task, and the extent to which the task was easy or difficult. The causal style asks subjects the extent to which various factors influenced, determined or caused the outcome. A recent metaanalytic review (Whitley & Frieze, 1985) found that wording style affected the magnitude of the effect that an outcome

had on the attributions made for it. For example, informational attributions to ability were found to have a mean correlation of .49 with outcome, whereas causal attributions had a mean r of only .28. The present study directly assessed the impact of question wording style on the attributions made for an achievement task.

Method

Subjects were 39 college student volunteers who were paid for their participation. The task was the Atari home video game Codebreaker, which requires players to use logic to deduce a randomly selected four-digit number. Subjects played the game for five minutes at a level of difficulty described by the manufacturer as moderate. Prior to their playing the game, two solution strategies were demonstrated to the subjects; afterwards they made informational and causal attributions to ability, effort, task difficulty, and luck for their performance on the game, and rated their success at the game. Order of presentation of the question wording styles was counterbalanced.

Results

The effect of question wording style on attributions was assessed by comparing the correlations of the two types of attributions with the success ratings. Correlations were used because all measures were on continuous scales; the significance of their differences was determined by Cohen and Cohen's (1975) method for dependent correlations.

The intercorrelations of ratings of causal attributions, informational attributions, and perceived success are shown in Table 1. Informational attributions to ability had a higher correlation with success than did causal attributions, $p < .01$. Correlalations of informational attributions with success were also significantly

Table 1

Correlations of Informational (I) and Causal (C) Attribution Ratings with Perceived Success (S) and Each Other

Attribution	I-S	C-S	I-C	$t(36)$	p
Ability	.75***	.25*	.06	3.149	<.01
Effort	.48**	.50**	.34*	-0.100	ns
Task	-.38**	.14	.34*	-2.520	<.02
Luck	.37**	-.07	.12	2.096	<.05

* $p < .05$. ** $p < .01$. *** $p < .001$.

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different from those of causal attributions for task difficulty, $p <$ .02, and luck, $p < .05$; in both cases the informational correlations were signficant when the causal correlations were not, and were opposite in sign.

The informational and causal attributions had only low to moderate correlations with each other (see Table 1), but inspection of the data suggested that their relation might be curvilinear. This possibility was tested by regressing the causal attributions on linear and quadratic components of the informational attributions (Cohen & Cohen, 1975). The results shown in Table 2 indicate significant curvilinear relationships for all four attributional categories.

Conclusions

The results of this study indicate that causal and informational attributions are not equivalent. The two wording styles resulted in The study also replicated Arkin et al.'s (1982) finding o low to moderate correlations between attributions elicited by the two wording different effect sizes for attributions to ability, luck, and the task.

Table 2

Change in Multiple R Squared When Predicting Causal Attribution Ratings from Informational Attribution Ratings

	Term	
Attribution	Linear	Quadratic
Ability	.004	.288***
Effort	.116*	.302***
Task	.114*	.099*
Luck	.013	.237**

*$p < .05$. **$p < .01$. ***$p < .001$

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styles, and showed that the low correlations were due to curvilinear relationships. Thus, for example, people might attribute causality for an outcome to ability only when they believe their ability to be especially high or low; moderate ability would be seen to have no causal effect. These results suggest that attributional researchers should carefully consider the type of attribution--informational or causal--they want to assess when they design their studies. Likewise, they should take care in generalizing informational results to causal issues and vice-versa. The results also suggest the need for more research on the relation between causal and informational attributions.

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